General

Guideline Title

Modifications in endoscopic practice for the elderly.

Bibliographic Source(s)

ASGE Standards of Practice Committee, Early DS, Acosta RD, Chandrasekhara V, Chathadi KV, Decker GA, Evans JA, Fanelli RD, Fisher DA, Foley KQ, Fonkalsrud L, Hwang JH, Jue T, Khashab MA, Lightdale JR, Muthusamy VR, Pasha SF, Saltzman JR, Sharaf R, Shergill AK, Cash BD. Modifications in endoscopic practice for the elderly. Gastrointest Endosc. 2013 Jul;78(1):1-7. [81 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Qureshi WA, Zuckerman MJ, Adler DG, Davila RE, Egan JV, Gan SI, Lichtenstein DR, Rajan E, Shen B, Fanelli RD, Van Guilder T, Baron TH, Standards of Practice Committee, American Society for Gastrointestinal Endoscopy. ASGE guideline: modifications in endoscopic practice for the elderly. Gastrointest Endosc. 2006 Apr;63(4):566-9.

Recommendations

Major Recommendations

Definitions for the quality of the evidence (++++, +++O, ++OO, and +OOO) and for the strength of the recommendations ("recommends" or "suggests") are provided at the end of the "Major Recommendations" field.

Summary

- The Practice Committee recommends that with optimal periprocedure evaluation and care, diagnostic and therapeutic endoscopic interventions can be safely performed in elderly patients. (+++O)
- The Practice Committee recommends that electrolyte-balanced polyethylene glycol–based colonoscopy preparations be used in elderly individuals to avoid potentially harmful fluid and electrolyte shifts. (+++O)
- The Practice Committee suggests using split-dosage cathartic bowel preparations in the elderly for colonoscopy preparation. (++OO)
- The Practice Committee recommends evaluating the patient's baseline functional status, cognitive ability, and capacity to understand the anticipated endoscopic procedure as part of the preprocedure assessment in the elderly. (+++O)
- The Practice Committee recommends standard monitoring procedures in the elderly during moderate sedation with heightened awareness of this population's increased response to sedatives. (+++O)
- The Practice Committee recommends that lower initial doses of sedatives than standard adult dosing should be considered in the elderly and that titration should be more gradual to allow assessment of the full dose effect at each dose level. (+++O)
- The Practice Committee suggests that practitioners exercise additional caution when performing colonoscopy in elderly patients because this

procedure may confer a higher risk of adverse events. (++OO)
- The Practice Committee recommends that colonoscopic screening and surveillance for colorectal cancer in patients of advanced age be individualized based on general health and comorbid medical illnesses. (+++O)

Definitions:

Grading of Recommendations, Assessment, Development and Evaluation (GRADE) System for Rating the Quality of Evidence for Guidelines

Quality of Evidence	Definition	Symbol
High quality	Further research is very unlikely to change confidence in the estimate of effect.	++++
Moderate quality	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.	+++O
Low quality	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate.	++OO
Very low quality	Any estimate of effect is very uncertain.	+OOO

Adapted from Guyatt GH, Oxman AD, Vist GE, et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ 2008;336:924-6.

Recommendation Strength

The strength of individual recommendations is based on both the aggregate evidence quality and an assessment of the anticipated benefits and harms. Weaker recommendations are indicated by phrases such as "the Practice Committee suggests," whereas stronger recommendations are typically stated as "the Practice Committee recommends."

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Conditions requiring gastrointestinal endoscopy

Guideline Category

Diagnosis

Risk Assessment

Screening

Treatment

Clinical Specialty

Gastroenterology

Geriatrics

Internal Medicine

Intended Users

Advanced Practice Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To provide information that may assist endoscopists in providing care to elderly patients undergoing endoscopy

Target Population

Elderly patients requiring gastrointestinal endoscopy

Note: Previous guidelines have defined geriatric patients as those 65 years of age and older, and patients of advanced age as those 80 years of age and older. Because physiologic age is a continuum, this guideline is not intended to apply to rigidly defined age ranges.

Interventions and Practices Considered

1. Use of electrolyte-balanced polyethylene glycol–based colonoscopy preparations
2. Use of split-dosage cathartic bowel preparations for colonoscopy preparation
3. Evaluation the patient's baseline functional status, cognitive ability, and capacity to understand the anticipated endoscopic procedure as part of the preprocedure assessment
4. Standard monitoring procedures during moderate sedation
5. Use of lower initial doses of sedatives than standard adult dosing with gradual titration
6. Exercising additional caution when performing colonoscopy in elderly patients
7. Individualized colonoscopic screening and surveillance, with consideration of general health and comorbid medical illnesses

Major Outcomes Considered

- Comorbid risk engendered by age-related diseases, such as cardiac and pulmonary dysfunction
- Age-related complication rates
- Procedure-related adverse event rates

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

A search of the medical literature was performed using PubMed. Additional references were obtained from the bibliographies of the identified articles and from recommendations of expert consultants. When limited or no data exist from well-designed prospective trials, emphasis is given to results from large series and reports from recognized experts.

The time frame for all searches was January 1990 to January 2013.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Grading of Recommendations, Assessment, Development and Evaluation (GRADE) System for Rating the Quality of Evidence for Guidelines

Quality of Evidence	Definition	Symbol
High quality	Further research is very unlikely to change confidence in the estimate of effect.	++++
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Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Guidelines for appropriate use of endoscopy are based on a critical review of the available data and expert consensus at the time the guidelines are drafted.

Rating Scheme for the Strength of the Recommendations

Recommendation Strength

The strength of individual recommendations is based on both the aggregate evidence quality and an assessment of the anticipated benefits and harms. Weaker recommendations are indicated by phrases such as "the Practice Committee suggests," whereas stronger recommendations are

typically stated as "the Practice Committee recommends."

Cost Analysis

The guideline developers reviewed published cost analyses.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

This document was reviewed and approved by the Governing Board of the American Society for Gastrointestinal Endoscopy.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate use of endoscopy in the elderly

Potential Harms

- As with any bowel preparation, it is important to maintain adequate hydration throughout the bowel preparation process to reduce the risk of dehydration-related adverse events in the elderly.
- A variety of physiologic processes contribute to the increase in sensitivity and sedation risk in geriatric patients. Arterial oxygenation progressively deteriorates with age and has been attributed to a mismatch of ventilation and perfusion. Cardiorespiratory stimulation in response to hypoxia or hypercarbia is blunted and delayed. Narcotic and non-narcotic central nervous system depressants produce greater respiratory depression and a greater incidence of transient apnea and episodic respirations. The risk of aspiration also increases as a result of a significant increase in the sensory stimulus threshold required for reflexive glottic closure.

Contraindications

Contraindications

- The relative and absolute contraindications for gastrointestinal endoscopy among the elderly are largely the same as those for adults.
- Sodium phosphate works by an osmotic mechanism of action, resulting in fluid and electrolyte shifts that can result in hyperphosphatemia, hypernatremia, hypokalemia, and worsening kidney function. These combinations are potentially fatal in the elderly, therefore, sodium phosphate should be avoided as a colonoscopy preparation in the elderly, particularly those with renal disease or cardiac dysfunction. Magnesium-based cathartics have been demonstrated to cause life-threatening hypermagnesemia in elderly patients, including those without preexisting renal disease. Consequently, the use of magnesium-based bowel preparations as a sole colonoscopy preparation should generally be avoided in the elderly.

Qualifying Statements

Qualifying Statements

- Guidelines for appropriate use of endoscopy are based on a critical review of the available data and expert consensus at the time the guidelines are drafted. Further controlled clinical studies may be needed to clarify aspects of this guideline. This guideline may be revised as necessary to account for changes in technology, new data, or other aspects of clinical practice.
- This guideline is intended to be an educational device to provide information that may assist endoscopists in providing care to patients. This guideline is not a rule and should not be construed as establishing a legal standard of care or as encouraging, advocating, requiring, or discouraging any particular treatment. Clinical decisions in any particular case involve a complex analysis of the patient's condition and available courses of action. Therefore, clinical considerations may lead an endoscopist to take a course of action that varies from these guidelines.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Patient Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2006 Apr (revised 2013 Jul)

Guideline Developer(s)

American Society for Gastrointestinal Endoscopy - Medical Specialty Society

Source(s) of Funding

American Society for Gastrointestinal Endoscopy

Guideline Committee

Standards of Practice Committee

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

The following authors disclosed financial relationships relevant to this publication: Dr Fisher, consultant to Epigenomics Inc; Dr Hwang, on the speakers' bureau of Novartis, consultant to U.S. Endoscopy, and received a grant from Olympus; Dr Fanelli, owner/director of New Wave Surgical and on the advisory board of Via Surgical; Dr Khashab, consultant to, receives honoraria from, and on the advisory board of Boston Scientific; Dr Chathadi, on the speakers' bureau of Boston Scientific. The other authors disclosed no financial relationships relevant to his publication.

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Guideline Availability

Electronic copies: Available from the American Society for Gastrointestinal Endoscopy Web site .

Print copies: Available from the American Society for Gastrointestinal Endoscopy, 1520 Kensington Road, Suite 202, Oak Brook, IL 60523

Availability of Companion Documents

None available

Patient Resources

The following are available:

- What to expect from your colonoscopy procedure. Patient education video. Available from the American Society for Gastrointestinal Endoscopy (ASGE) Web site .
- What to expect from your upper endoscopy procedure. Patient education video. Available from the ASGE Web site .

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NGC Status

This NGC summary was completed by ECRI on June 7, 2006. This summary was updated by ECRI Institute on January 7, 2009 following the U.S. Food and Drug Administration (FDA) advisory on oral sodium phosphate (OSP) products for bowel cleansing. The currency of the guideline was reaffirmed by the developer in 2011 and updated by ECRI Institute on November 3, 2011. This summary was updated by ECRI Institute on September 25, 2013.

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